SANTA CRUZ BIOTECHNOLOGY, INC.

LXRα/β (H-7): sc-377260

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Retinoids are metabolites of vitamin A (retinol) and are believed to represent important signaling molecules during vertebrate development and tissue differentiation. The cooperation of liver X receptors (LXRs) α and β and retinoic X receptor (RXR) modulate the expression of several genes involved in lipid metabolism in hepatocyte and macrophages. RXR is the receptor for 9-*cis* retinoic acid and dimerizes with VDR, TR, PPAR and several novel receptors, including liver X receptors LXRα (also referred to as RLD-1), LXRβ and FXR. FXR and LXR fall into a category of proteins termed "orphan receptors" because of their lack of a defined function, and in the case of LXR, the lack of a defined ligand. Both LXR/RXR and FXR/RXR heterodimers retain their responsiveness to 9-*cis* retinoic acid. LXRα and LXRβ share considerable sequence homology and several functions, respond to the same endogenous and synthetic ligands and play critical roles in maintaining lipid homeostasis. LXRβ is ubiquitously expressed and enriched in tissues of neuronal and endocrine origin.

CHROMOSOMAL LOCATION

Genetic locus: NR1H3 (human) mapping to 11p11.2, NR1H2 (human) mapping to 19q13.33; Nr1h3 (mouse) mapping to 2 E1, Nr1h2 (mouse) mapping to 7 B4.

SOURCE

LXRα/β (H-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 433-461 at the C-terminus of LXRβ of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-377260 X, 200 µg/0.1 ml.

LXRα/β (H-7) is available conjugated to agarose (sc-377260 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377260 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377260 PE), fluorescein (sc-377260 FITC), Alexa Fluor® 488 (sc-377260 AF488), Alexa Fluor® 546 (sc-377260 AF546), Alexa Fluor® 594 (sc-377260 AF594) or Alexa Fluor® 647 (sc-377260 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377260 AF680) or Alexa Fluor® 790 (sc-377260 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377260 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

LXRα/β (H-7) is recommended for detection of LXRα and LXRβ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

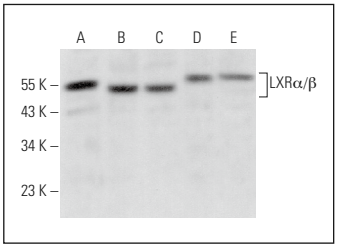
LXRα/β (H-7) is also recommended for detection of LXRα and LXRβ in additional species, including equine, canine, bovine, porcine and avian.

LXRα/β (H-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

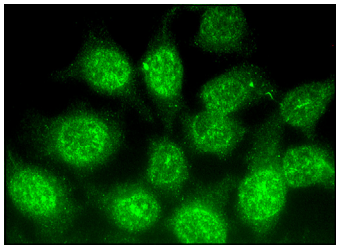
Molecular Weight of LXRα/LXRβ: 50/56 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, c4 whole cell lysate: sc-364186 or M1 whole cell lysate: sc-364782.

DATA



LXRα/β (H-7): sc-377260. Western blot analysis of LXRα/β expression in THP-1 (**A**), c4 (**B**), M1 (**C**), A549 (**D**) and U-87 MG (**E**) whole cell lysates.



LXRα/β (H-7): sc-377260. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Wang, J., et al. 2016. Relationship of liver X receptors α and endoglin levels in serum and placenta with preeclampsia. PLoS ONE 11: e0163742.
2. Amorim, R.P., et al. 2017. Short-term effects of green tea chronotherapy on the metabolic homeostasis of mice on different diets. Genet. Mol. Res. E-published.
3. Bilotta, M.T., et al. 2019. Activation of liver X receptor up-regulates the expression of the NKG2D ligands MICA and MICB in multiple myeloma through different molecular mechanisms. FASEB J. 33: 9489-9504.
4. Tsuboi, T., et al. 2020. Molecular mechanism for nobiletin to enhance ABCA1/G_1 expression in mouse macrophages. Atherosclerosis 297: 32-39.
5. Slominski, A.T., et al. 2021. Vitamin D and lumisterol derivatives can act on liver X receptors (LXRs). Sci. Rep. 11: 8002.
6. Brotman, S.M., et al. 2022. Subcutaneous adipose tissue splice quantitative trait loci reveal differences in isoform usage associated with cardiometabolic traits. Am. J. Hum. Genet. 109: 66-80.

RESEARCH USE

For research use only, not for use in diagnostic procedures.